

31 compound to produce the copolymer; and it can be made by combining a quantity of divalent  
32 metal compound, and a quantity of monovalent metal compound, such as sodium hydroxide,  
33 with an acrylic acid compound to produce the terpolymer. In this regard, the ratio of divalent  
34 metal compound to acrylic acid compound is an amount in the range of from about 0.15 to  
35 about 0.5 moles divalent metal compound per mole of acrylic acid compound, and the ratio of  
36 monovalent metal compound to acrylic acid compound is an amount in the range of from about  
37 0.0 to about 0.5 moles monovalent metal compound per mole of acrylic acid compound. All of  
38 the acrylic acid compound is not converted to a metal salt thereof. (Disclosure, page 8, lines  
39 169-177; Claims 12, 16)

40 The mentioned minimum ratio of divalent metal compound to acrylic acid compound is  
41 about 0.15 moles divalent metal compound per mole of acrylic acid compound. Thus, the  
42 resulting polymer composition must include a quantity of divalent metal salt of the acrylic acid  
43 compound, such as magnesium acrylate. Accordingly, the combination of polymeric elements  
44 in the resulting water soluble polymer composition of this invention, stated in stoichiometric  
45 terms (as seen in Formula 1), includes from about 0.65 to about 2.75 units of divalent metal salt  
46 of acrylic acid compound per unit of acrylic acid compound, and in the range of from 0 to about  
47 2.25 units of monovalent metal salt of acrylic acid compound per unit of acrylic acid compound.  
48 (Disclosure page 6, line 133 to page 7, line 148; Claims 1, 14)

49 This invention still further provides a cross linked acrylic acid polymer which is water  
50 insoluble and stable at temperatures up to about 450°F. The cross linked acrylic acid polymer,  
51 a water insoluble gel, is made by reacting the water soluble polymer composition of this  
52 invention with a suitable cross linking agent. In this connection, Applicant discovered that the  
53 water insoluble gel will not form if the mole ratio of divalent metal compound to acrylic acid  
54 compound in the recipe for the water soluble polymer is less than about 0.15. (Disclosure page